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ABSTRACT

This research report deals with the transformations of stimulus sentences that primary grade speakers of Hawaii Creole English (HCE) made when they were asked to repeat sentences said to them in Standard English. The test used was the Kamehameha Early Education Program (KEEP) Standard English Repetition Test (SERT) which was administered to the 21 subjects twice a year in kindergarten, first and second grades. The four transformation categories used in the investigation were transformational rule difference, lexical substitution, transformational rule difference and lexical substitution, and unmarked surface structure. While the children's responses could be divided into four categories, this paper concentrates on only one of these, HCE transforms, that is, transforming the Standard English (SE) feature into HCE while maintaining the meaning. Results indicate that the majority of transforms in both kindergarten and second grade involve transformational rule differences, that is, a transform based on a difference in the rules of grammar of SE and HCE. Although the frequency of transforms gradually diminishes across time, some transforms, such as those involving the use of the SE copula, are relatively resistant to change. One conclusion of the study is that to date, the phenomenon of transformation has no documented negative educational consequences. (Author/AMH)

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Technical Report #70

SERT Transformation Study

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The Kamehameha Early Education Program

The Kamehameha Early Education Program (KEEP) is a research and development program of The Kamehameha Schools/Bernice P. Bishop Estate. The mission of KEEP is the development, demonstration, and dissemination of methods for improving the education of Hawaiian and Part-Hawaiian children. These activities are conducted at the Ka Na'i Pono Research and Demonstration School, and in public classrooms in cooperation with the State Department of Education. KEEP projects and activities involve many aspects of the educational process, including teacher training, curriculum development, and child motivation, language, and cognition. More detailed descriptions of KEEP's history and operations are presented in Technical Reports #1-4.

Abstract

Research using repetition tests of nonstandard dialects and Standard English (SE) has largely concentrated on number of correct repetitions. Less often explored has been the phenomenon of dialect transformation of stimulus sentences. Kindergarteners attending the Kamehameha Early Education Program's (KEEP) demonstration school transform approximately one-quarter of the items on KEEP's Standard English Repetition Test (SERT) to an equivalent form of Hawaiian Islands Creole English (HCE). By second grade about ten percent of all SERT repetitions are transformed to HCE. Four categories descriptive of transform variations were developed to categorize SERT responses of children across three grade levels--kindergarten to second. Results indicated that the majority of transforms both in kindergarten and second grade involve transformational rule differences (TRD) between SE and HCE. A TRD is a transform based on a difference in the rules of grammar of SE and HCE. Although the frequency of transforms gradually reduces across time, some transforms are resistant to change. For example, the SE copula is relatively resistant to change if it is embedded in a sentence, as opposed to a sentence-final position. To date, the phenomenon of transformation has no documented negative educational consequences.

Technical Report #70

SERT Transformation Study

Richard R. Day Ronald Gallimore Roland G. Tharp Charlene Sato

Repetition tests have proven a useful method of measuring a child's level of language performance. Such measures have been used in studies of first and second language and second dialect acquisition (Baratz, 1969; Day, Boggs, Tharp, Speidel, & Gallimore, 1975; Johnson, 1975; Politzer, Hoover, & Brown, 1974; Swain, Dumas, & Naiman, 1974).

Although usually presented as number of correct repetitions, repetition test results may be categorized in a number of different ways. This report deals with the tranformations which speakers of a creolized variety of English made in repeating sentences said to them in Standard English (SE). Reports on the repetition test used (The Standard English Repetition Test or SERT) are presented elsewhere (Day et al., 1975); the concern here is with four types of transformations and their changes across time.

The subjects in this investigation were students attending a laboratory school in Honolulu. They live in an area in which Hawaii Creole English (HCE) is widely used. The subjects were given the Standard English Repetition Test (SERT) twice a year, fall and spring in kindergarten, first, and second grades. The responses which the children gave were categorized as

1. exact SE--the subject repeated the feature exactly as given by test administrator.
2. other SE--the subject changed the feature slightly (e.g., I'm to I am) without changing code (SE) or meaning.

3. HCE transforms--the subject transformed the SE feature into HCE, but maintained the meaning (e.g., didn't come to neva come).
4. bust--the subject's repetition of a feature changed its meaning, was unintelligible or inaudible, or the subject did not respond.

This paper examines responses in category 3, HCE transforms, for 21 children who attended the school over three years.

Categories of Transformation

Johnson (1975) reported that black children made three types of changes when reading SE material orally: substitution, omission, and insertion. That is, the child might substitute a word from his vernacular, Black English (BE), for the SE word in the text; or he might omit a word, since his primary speech code did not have the word in its grammar. Finally, the child might insert a word from BE into the text, a word missing in SE. These three shifts are determined by the rules of BE grammar.

We observed similar phenomena when administering the SERT to HCE-speaking children. The children apparently transformed SE sentences into HCE equivalents, and these transformations seemed to take the forms reported by Johnson (1975): substitution, omission, insertion. However, fine-grained analysis of the transformations suggests that these three categories did not completely or accurately describe all transforms.

For example, omissions were associated with at least two significant linguistic differences: surface structure differences and underlying structure differences. We hypothesized that in the former, the feature was a part of the underlying structure of HCE, but was not present in surface structure, having been deleted or neutralized by a transformational rule. For example, it is grammatical in HCE to omit the past

tense marker wen from sentences, although there is no reason to believe that it is not part of the underlying structure. (For a detailed account of this phenomenon, see Day, 1975).

For underlying structure differences, we assumed that there were crucial differences between the two grammars, and that certain of the SERT features, significant markers of SE, were not present in the grammar of HCE. For instance, the copula is an integral part of SE grammar, but HCE does not exhibit a similar syntactic construction.

In addition to the two types of omission, there were two types of substitution: lexical and word-order. A lexical change involves substituting an equivalent HCE word for a word in SE. A word order change is self-descriptive--an HCE word order is substituted for SE word order. A yes-no question in SE with a modal such as can, involves switching the subject and the modal, from you can eat, for example, to can you eat. A similar sentence in HCE, however, depends not on a subject-verb switch, but on a change in intonation. Thus, the yes-no question and the declarative statement in HCE have identical surface word order, but different intonation.

The final categories were established in the following manner. Responses which the HCE-speaking subjects gave were carefully examined, in addition to those responses which were predicted on the basis of the differences between the two grammars. University of Hawaii specialists in HCE were consulted on the viability of transformation categories. As a result, the following four categories were used in the investigation:

1. Transformational Rule Difference

   Examples:

   a. Copula: be (am, is, are, etc.)

b. Interrogative

1. do-support

2. subject-verb inversion

3. indirect question

2. Lexical Substitution

Examples:

a. Copula: stay

b. Negatives: don't, ain't, cannot

c. Pronominal: om

d. Indefinite Article: one

3. Transformational Rule Difference and Lexical Substitution

Examples:

a. Negatives: no, neva

b. Past Tense Marker: wen (go) + verb

4. Unmarked Surface Structure (i.e., present in underlying structure of HCE)

Examples:

a. Past Tense: eat, call, chase (eaten--eat)

b. Present Tense: stay (stays--stay)

c. Progressive Tense: Ø (being--Ø)

d. Conditional: Ø (if--Ø)

The first category, transformational rule difference (TRD), means the change from SE to HCE is one which is based on a difference in rules in the two grammars. For example, SE has a rule of subject-verb inversion used in forming yes-no questions: declarative: "John is eating."; interrogative: "Is John eating?" The intonation may or may not be the same in SE. HCE is different. Yes-no questions are not formed by a

subject-verb inversion rule; the intonation changes. This is categorized as a transformational rule difference between HCE and SE.

Lexical substitution, the second category, is the replacement of a SE vocabulary item by an HCE equivalent. The substitution of the HCE indefinite article one for the SE a/an is an example.

The third category combines the first two--transformational rule difference and lexical substitution. The fourth category, unmarked surface structure, captures surface structure differences between HCE and SE. In this category, we assume that there is no difference in the underlying structure; the difference is found in the surface representation. For example, HCE has a past tense marker, wen, which comes before the simple form of the verb. It is not unusual for it to be absent, however. The difference between HCE and SE then, would be a surface structure difference.

Results

Table 1 presents the percentages of HCE transforms for one group of children from Fall kindergarten to Spring second grade by category of transformation. Twenty-eight percent of all SERT responses in Fall kindergarten were classified as HCE transforms of one kind or another. The transformational rule difference (TRD) type of transforms constituted the majority; 63.5% of all transforms involved a TRD. The frequencies of occurrence of the remaining three were 17.6% unmarked surface structure, 11.8% transformational rule difference and lexical substitution, and 7.1% lexical substitution. Thus when HCE-speaking children enter kindergarten at a modal age of five, about one-fourth of their responses to a SE repetition task are HCE transformations and about two-thirds of these are transformational rule differences.

Table 1

Frequencies by Type of HCE Transformation of SERT Items;

Kindergarten Through Second Grade

(N=21)

		TRD		LS		TRD		USS		Total
	Grade	N	%	N	%	N	%	N	%	N
Fall	K	108	63.5	12	7.0	20	11.8	30	17.6	170
Spring	K	85	69.7	6	4.9	7	5.7	24	19.7	122
Fall	1	86	74.1	2	1.7	8	6.9	20	17.2	116
Spring	1	85	72.6	5	4.3	10	8.5	17	14.5	117
Fall	2	62	67.4	5	5.4	9	9.8	16	17.4	92
Spring	2	60	77.9	1	1.3	1	1.3	15	19.5	77

At the end of second grade only 12.6% of all responses to the SERT are HCE transformations (see Table 1). Of these, the great majority are again TRDs (77.9%). Of the other three categories, only unmarked surface structure transforms occur with any frequency (18.2%). The other two categories occur as traces.

It is clear from Table 1 that both transformational rule differences and unmarked surface structures show some resistance to change. The former drop from a total of 108 in Fall kindergarten to 60 in Spring second grade. The figures for the latter are 30 for kindergarten and 15 for second grade. For both categories respectively, about half again as many instances occur at the end of second grade. Of course, by Spring second grade, the percents of total SERT responses classified as transformational rule differences and unmarked surface features are only 9.9 and 2.3 respectively.

The data in Table 1 involve all counted transformations. They do not show whether the changes across time involve the same items on the SERT.

Tables 2-5 present the history of each transform originally given in Fall kindergarten for each of the transform categories.

Table 2

Fall 1972 TRD Transformations Across Time:

(Spring 1973 - Spring 1975) by Four SERT Scoring Categories

	Spring Kindergarten	Fall First	Spring First	Fall Second	Spring Second
	N	N	N	N	N
HCE	46	41	43	33	29
Exact SE and Other SE	53	51	58	62	70
Bust	9	16	7	3	9
Total	108	108	108	108	108

Table 3

Fall 1972 Lexical Substitution Transformation

Across Time by Four SERT Scoring Categories

	Spring Kindergarten	Fall First	Spring First	Fall Second	Spring Second
	N	N	N	N	N
HCE	6	2	5	5	1
SE and Other SE	4	7	3	6	8
Bust	2	3	4	1	3
Total	12	12	12	12	12

Table 4

Fall 1972 TRD and LS Transformations

Across Time by Four SERT Scoring Categories

	Spring Kindergarten	Fall First	Spring First	Fall Second	Spring Second
	N	N	N	N	N
HCE	7	8	10	9	14
SE and Other SE	10	9	9	9	17
Bust	3	3	1	2	2
Total	20	20	20	20	20

Table 5

Fall 1972 Unmarked Surface Structure Transformation

Across Time by Four SERT Scoring Categories

	Spring Kindergarten	Fall First	Spring First	Fall Second	Spring Second
	N	N	N	N	N
HCE	24	20	17	16	15
SE and Other SE	4	8	12	13	15
Bust	2	2	1	1	0
Total	30	30	30	30	30

If in Fall kindergarten a child transformed a particular SE item to HCE, what did the child do with the same item on each succeeding administrations? Since there is an overall reduction in the number of transforms (see Table 1), and an increase in the amount of SE, presumably the changes should be toward SE. Inspection of Tables 2 through 5 confirm that in virtually every

instance an item that was originally transformed into HCE was subsequently repeated as SE--if it changed at all--since there were few changes in the Bust category.

Of particular interest are those resistant transforms given as HCE transforms in Fall kindergarten and Spring second grade. There are 29 transformation rule difference (TRD) and 15 unmarked surface structure (USS) items that were transformed both in Fall kindergarten and Spring second grade. Table 6 presents the actual SERT items represented by the 29 and 15 resistant transforms.

Resistant TRD Transforms

The bulk of the resistant transforms in the TRD category involve the copula. Since this partly reflects the emphasis on the copula in the SERT, it is uncertain that the finding indicates a special SE production problem for second grade HCE speakers. However, it is likely that copular omission due to TRDs does not result in comprehension loss for these children.

Of the features which are sentence-final copulas, numbers 2b, 6b, 7b, 11b, only 6b remains an HCE transform (TRD type) from kindergarten to second grade. 6b is technically not sentence-final, since too follows: My mother's cleaning the house and Mary is too.

Those copulas which are embedded in sentences remain transforms. The following features are embedded: 2a, 3, 6a, 8a, 9b, 10c, 12a, and 14a. Table 6 shows that 2a, 9b, and 14a had at least five HCE transforms.

Resistant USS Transforms

The category of unmarked surface structure transforms presents a less clear picture. Table 6 shows that three features--12b, 13, and 14c--accounted for all examples of resistant USS transforms with 3, 8, and 4 respectively.

Table 6

Unmarked Surface Structure and Transformational Rule Differences

From Fall Kindergarten to Spring Second Grade

Subj.	No.	Feature	Fall '72	Spring '73	Fall '73	Spring '74	Fall '74	Spring '75
1	2a	I'm	I+Ø	I'm	I'm	I+Ø	I'm	I+Ø
2	2a	I'm	I+Ø	I+Ø	I'm	I+Ø	I'm	I+Ø
3	7a	do you know	you know	you know	you know	you know	you know	you know
	14a	's	Ø	Ø	Ø	Ø	Ø	Ø
	14c	Ved	pass	pass	pass	pass	pass	pass
4	2a	I'm	I+Ø	I+Ø	I+Ø	I+Ø	I+Ø	I+Ø
	6b	is ##	is	is	is	is	is	is
	13	called	wen call	call	call	call	call	call
5	13	's	Ø	's	is	Ø	is	Ø
	9b	's	stay	Ø	Ø	Ø	Ø	Ø
	13	called	call	call	called	call	call	call
	14a	's	Ø	Ø	Ø	Ø	Ø	Ø
	14c	Ved	VØ	VØ	VØ	VØ	VØ	VØ
6	6b	is ##	Ø	Ø	Ø	(bust)	Ø	Ø
	12b	stays	stay	stay	stay	stay	stay	stay
	13	called	call	called	called	called	called	call
	14a	's	Ø	Ø	Ø	Ø	Ø	Ø
7	2a	's	Ø	Ø	Ø	Ø	Ø	Ø
	12b	stays	stay	stay	stay	stay	stay	stay
	13	called	call	call	call	call	called	call
	14a	's	Ø	Ø	Ø	Ø	Ø	Ø
	14c	Ved	VØ	VØ	VØ	VØ	VØ	VØ

Subj.	No.	Feature	Fall '72	Spring '73	Fall '73	Spring '74	Fall '74	Spring '75
8	9b	's	Ø	Ø	Ø	's	Ø	Ø
9	7a	do you know	you know	SE	SE	you know	SE	you know
	9b	's	Ø	Ø	Ø	's	's	Ø
10	7a	do you know	you know	you know	you know	you know	(bust)	you know
	9b	's	Ø	Ø	Ø	Ø	Ø	Ø
	12a	's not	Ø not	Ø not	(bust)	Ø not	no stay	Ø not
	12b	stays	stay	stay	stay	(bust)	stay	stay
	13	called	call	call	call	call	call	call
	14c	Ved	VØ	(bust)	(bust)	VØ	(bust)	VØ
11	2a	I'm	I+Ø	I+Ø	I+Ø	I+Ø	I+Ø	I+Ø
	13	Ved	VØ	VØ	VØ	Ved	VØ	VØ
12	14a	's	Ø	Ø	Ø	Ø	Ø	Ø
13	2a	I'm	I+Ø	I+Ø	I+Ø	I+Ø	I+Ø	I+Ø
	13	called	call	call	call	call	call	call
	14a	's	Ø	(bust)	Ø	Ø	Ø	Ø
14	2a	I'm	I+Ø	I+Ø	I'm	I+Ø	I+Ø	I+Ø
	3	's	Ø	Ø	Ø	Ø	's	Ø
	6a	's	Ø	's	(bust)	Ø	Ø	Ø
	7a	do you know	you know	SE	you know	you know	SE	you know
	9b	's	Ø	Ø	Ø	Ø	Ø	Ø
	13	called	call	call	call	call	call	call
15	7a	do you know	you know	you know	SE	SE	SE	you know

Ø = zero (e.g., Ø copula)
SE = Standard English response (exact SE)
I+Ø = HCE response (transformation)
Ø = HCE response

you know = HCE response
call = HCE response
Ved = either passed or chased (exact SE)
VØ = HCE response
stay = SE response

NOTE: Included in this table are only those responses which were HCE in Fall '72 and HCE in Spring '75. Notice that not all responses were HCE across all administrations. Some were SE; others, busts.

Two of these, 13 and 14c, involve past tense--13 is simple past and 14c tests the past participle in a passive construction. It might be speculated that these two areas of the HCE grammar are more resistant to change than others, and that their SE counterparts are among the last features of SE to be learned. The feature 12b tests the marker 's of the third person singular habitual. HCE does not have this morpheme. Since it is a redundant marker in SE, it might not be salient for the HCE speaker.

Discussion

We have no clear-cut explanation for why transformational rule difference (TRD) and unmarked surface structure (USS) transformations are likely to remain HCE. USSs are close to SE in the sense that the change involves no rule difference or different vocabulary item. Perhaps the distinction is less apparent to the HCE speaker; therefore it would be less likely to shift. It seems more obvious why transformational rule differences are resistant, though why those involving lexical substitutions change is less clear. It could be that vocabulary items are rather obvious features of SE, and, as such, are learned easily.

The data also suggest a role is played in the HCE transformations by the location of the feature in the sentence. For example, the copula is tested in both mid-sentence position and sentence-final position, embedded in a complex sentence, and in a simple sentence. The copula in sentence-final position is more often repeated exactly than when it appears in other positions, even though the sentences may be less simple. Examples (1) and

(2) illustrate the point:

(1) I'm not sure where the teacher is.

(s) I think she's in the office.

The sentence-final is in (1) is repeated correctly (as exact SE) more than are the two contracted forms--'m in (1) and 's in (2).

Of course there is more to the HCE transforms than a difference between the two grammar HCE and SE. There are other factors which could influence a subject's response on the SERT--amount of previous exposure to SE, age (Day et al., 1975, found that exact SE scores on the SERT increase with age), motivation, and so on. Significantly, few original transforms subsequently become busts, suggesting SERT performance is not affected by a child unsuccessfully trying to use SE and avoiding transformations. Across time the children either successfully switch to an SE repetition or continue to transform, thus the transformational phenomena does not appear to interact with testing procedure to the disadvantage of nonstandard dialect speakers.

While HCE transforms demonstrate that a child comprehends SE, it is unclear what significance to attach to such responses. We have reported elsewhere (Day et al., 1975) that exact SE scores correlate significantly with scores on I.Q. tests, reading scores, and so on; however, we find no such correlations, positive or negative, with HCE transformation scores. Apparently whether a child tends to transform SE to HCE has no influence on an HCE-speaking child's school performance. Whatever the phenomenon reflects there are no documented negative consequences and thus there appear to be no reason to discourage transformations.

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